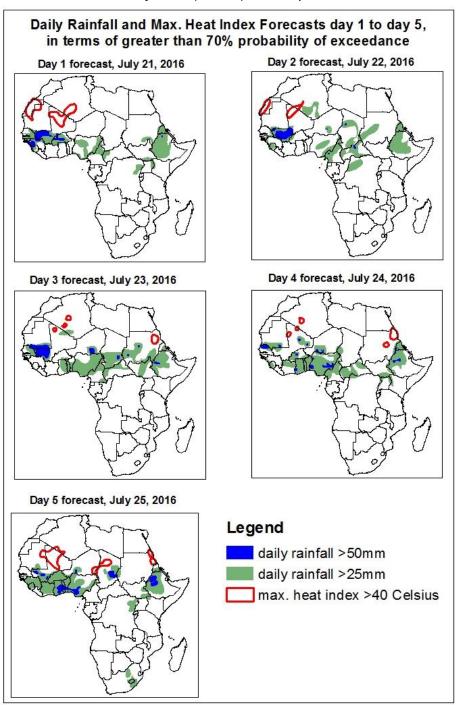
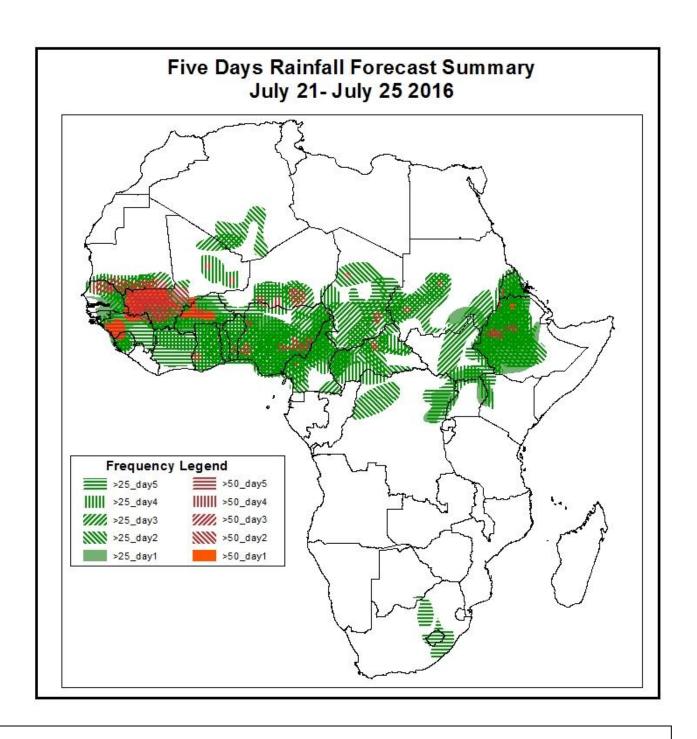
- 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on July 20, 2016)
- 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: July 21– July 25 2016)
  The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



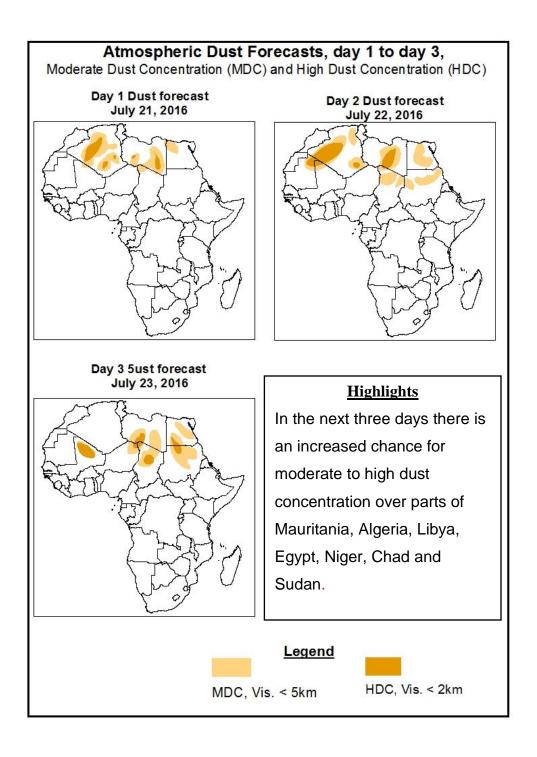


# **Highlights**

In the next five days, westward propagating lower-level cyclonic systems across West Africa and lower level wind convergences across the central and eastern Sahel, Sudan and Ethiopia are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over southern Mauritania, portions of Senegal, Guinea, Sierra Leone, Mali and Burkina Faso, northern Cote d'Ivoire, Ghana, Togo and Benin, southern Niger, portions of Nigeria, Cameroon, Chad, Sudan CAR, South Sudan and Uganda, local areas of eastern DRC, Ethiopia and Eritrea.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: July 21– July 23, 2016)

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



#### 1.3. Model Discussion, Valid: July 21 – July 25, 2016

The Azores high pressure system over the Northeast Atlantic is expected to maintain average central pressure value of 1024-hPa during the forecast period.

The St. Helena High pressure system over the Southeast Atlantic Ocean is expected to intensify, with its central pressure value increasing from 1028-hPa to 1036-hPa through 24 to 72 hours, and it tends to weaken, with its central pressure value decreasing from 1036-hPa to 1032-hPa through 96 to 120 hours.

The Mascarene high pressure system over the Southwest Indian Ocean is expected to weaken, with its central pressure value decreasing from 1028-hPa to 1024-hPa through 48 to 72 hours, and tends to maintain central pressure value 1024-hPa through 72 to 120 hours.

The 1016mb isobar, associated with the East African ridge is expected to remain near the latitudes of Ethiopia during the forecast period.

The central pressure values associated with the heat low in western Sahel and the central pressure value associated with the heat low across Sudan is expected to maintain central pressure value 1008-hPa during the forecast period. The central pressure associated with heat low over the central Sahel is expected to remain in the range between 1008hPa to 1012hPa and during the forecast period.

At 925hPa provided an anticyclonic circulation and its associated ridge is expected to prevail across Libya while expanding westward into neighboring regions during the forecast period. Strong wind associated with this system may lead to moderate to high dust concentration across portions of Mauritania, Algeria, Libya, Egypt, Niger, Chad and Sudan.

At 850hPa level, a cyclonic circulation is expected to propagate westwards in the region between Niger and Mauritania during the forecast period. A zonal wind convergence is expected to prevail in the region between chad and Sudan during the forecast period.

At 700-hPa level, a deep trough in the easterly flow is expected to propagate across the Gulf of Guinea region during the forecast period.

In the next five days, westward propagating lower-level cyclonic systems across West Africa and lower level wind convergences across the central and eastern Sahel, Sudan and Ethiopia are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over southern Mauritania, portions of Senegal, Guinea, Sierra Leone, Mali and Burkina Faso, northern Cote d'Ivoire, Ghana, Togo and Benin, southern Niger, portions of Nigeria, Cameroon, Chad, Sudan CAR, South Sudan and Uganda, local areas of eastern DRC, Ethiopia and Eritrea.

There is an increased chance for maximum heat index to exceed 40°C over portions of Western Sahara, local areas in Mauritania, Mali, Niger and Sudan.

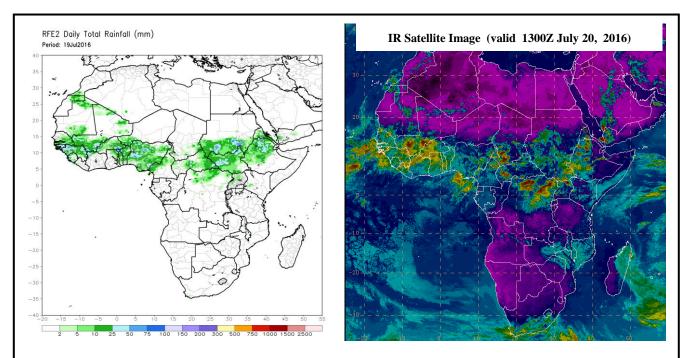
### 2.0. Previous and Current Day Weather over Africa

#### 2.1. Weather assessment for the previous day (July 19, 2016)

Moderate to locally heavy rainfall was observed over southern Western Morocco and northern Sahara, portions of Senegal, Mauritania and Mali, Gambia, Guinea Bissau and Guinea, portions of Sierra Leona, local areas of northern Cote d'Ivoire and Ghana, Burkina Faso, Togo, Benin and Nigeria, western Niger, portions of Chad, CAR, Sudan, South Sudan, DRC, Uganda, Ethiopia and Eritrea.

## 2.2. Weather assessment for the current day (July 20, 2016)

Intense convective clouds are observed over portions of Senegal, Mali, Guinea and Cote d'Ivoire, northern Ghana, portions of Cameroon, Chad, CAR and DRC, Uganda and South Sudan, local areas of western Sudan, portions of Eritrea and Ethiopia.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (right) based on IR Satellite image.

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